COUNTRY INN (PWSNO 1090035)
SOURCE WATER ASSESSMENT REPORT

September 24, 2002

State of Idaho
Department of Environmental Quality

SOURCE WATER ASSESSMENT FOR COUNTRY INN

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on well construction characteristics; site specific sensitivity factors associated with the aquifer the water is drawn from; a land use inventory inside the well recharge zone; and water quality history. For non-community transient water systems like Country Inn, recharge zones were generally delineated as a 1000-foot fixed radius around the wells.

This report, *Source Water Assessment for Country Inn* describes factors used to assess the well's susceptibility to contamination. The analysis relies on information from the well log; an inventory of land use, well site characteristics, potential contaminant sites identified through a Geographic Information System database search; and information from the public water system file. The ground water susceptibility analysis worksheet for Country Inn is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Well Construction. A flowing artesian well at the toe of the hillside behind the motel supplies drinking water for the Country Inn and a residence located about 2 miles north of Sagle, Idaho. The well log is not on file with DEQ and was not found in a search of Idaho Department of Water Resources records. The well was drilled in August 1979 to a reported depth of 105 feet. It has a 6-inch steel casing that extends 14 inches above ground and is fitted with a watertight well cap. Water from the well is chlorinated before it enters a 2700 gallon reservoir located in the pump room about 60 feet north of the well.

Country Inn was mostly in compliance with *Idaho Rules for Public Drinking Water Systems* when inspected during a sanitary survey in June 1998. A small amount of leakage was noted around the electrical conduit leading into the wellhead. The only necessary improvement mentioned in the survey report was installation of a flow meter on the well discharge line, as specified in approved plans for the water system.

Well Site Characteristics. Soils in the well recharge zone are generally well drained. Well-drained soils provide little protection against migration of contaminants toward the well. The soil structure above the water table at the well site is not known.

Potential Contaminant Inventory. Land use inside the protection zone delineated for the Country Inn well is suburban. The septic system for the motel and a man made pond that lie 300 to 500 feet north east of the well were not counted as significant potential contaminant sites in the analysis for your well.

Septic systems this distance from a well only become concern when they serve as community sewage disposal sites or when the density of individual systems exceeds 10 in 40 acres. The pond was discounted because an on site inspection in July 1999 determined that the well is not influenced by surface water. As a major transportation corridor, Highway 95 was counted as a potential source of all classes of regulated contaminants.

Water Quality History. Country Inn, under regulation as a non-community transient public water system, is required to monitor quarterly for bacterial contamination. All samples tested since the spring of 1998 have been negative for total coliform bacteria. The system failed to monitor for total coliform a total of eight quarters in 1999, 2000 and 2001. Annual nitrate samples collected between 1993 and 2001 show concentration ranging between 0.023 and 0.049 mg/l. The Maximum Contaminant Level (MCL) for nitrate is 10 mg/l.

Susceptibility to Contamination. An analysis of the Country Inn well, incorporating information from the public water system file and the potential contaminant inventory, ranked the well moderately susceptible to all classes of regulated contaminants. 7 of the points in the final susceptibility scores relate to risk factors usually assessed with information from the well log. Even though these unknown risks are given "worst case" scores, the moderate susceptibility ranking for your well is in line with rankings for other public water system wells in the Sagle area. The complete analysis worksheet for your well is on page 6 of this report. Formulas used to compute the final susceptibility scores are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Drinking water protection for Country Inn should start with development of a maintenance and testing schedule so important routine tasks don't get overlooked. Consistent monitoring is the best way to spot problems that could develop into a public health threat if left un-remedied. Protecting an existing well is always far more cost effective than having to replace a source damaged through neglect.

Every system should have an emergency response plan. There is a simple, fill-in-the-blanks form available on the DEQ website (www.deq.state.id.us/water/water1.htm) to guide systems through the emergency planning process.

Because the water system may not have direct jurisdiction over the entire recharge zone for its well, it will be important to form partnerships with neighbors, and public agencies to regulate land uses that can degrade ground water quality.

The goal of source water protection is to maintain current water quality for the future despite the changes we can expect with population growth in North Idaho.

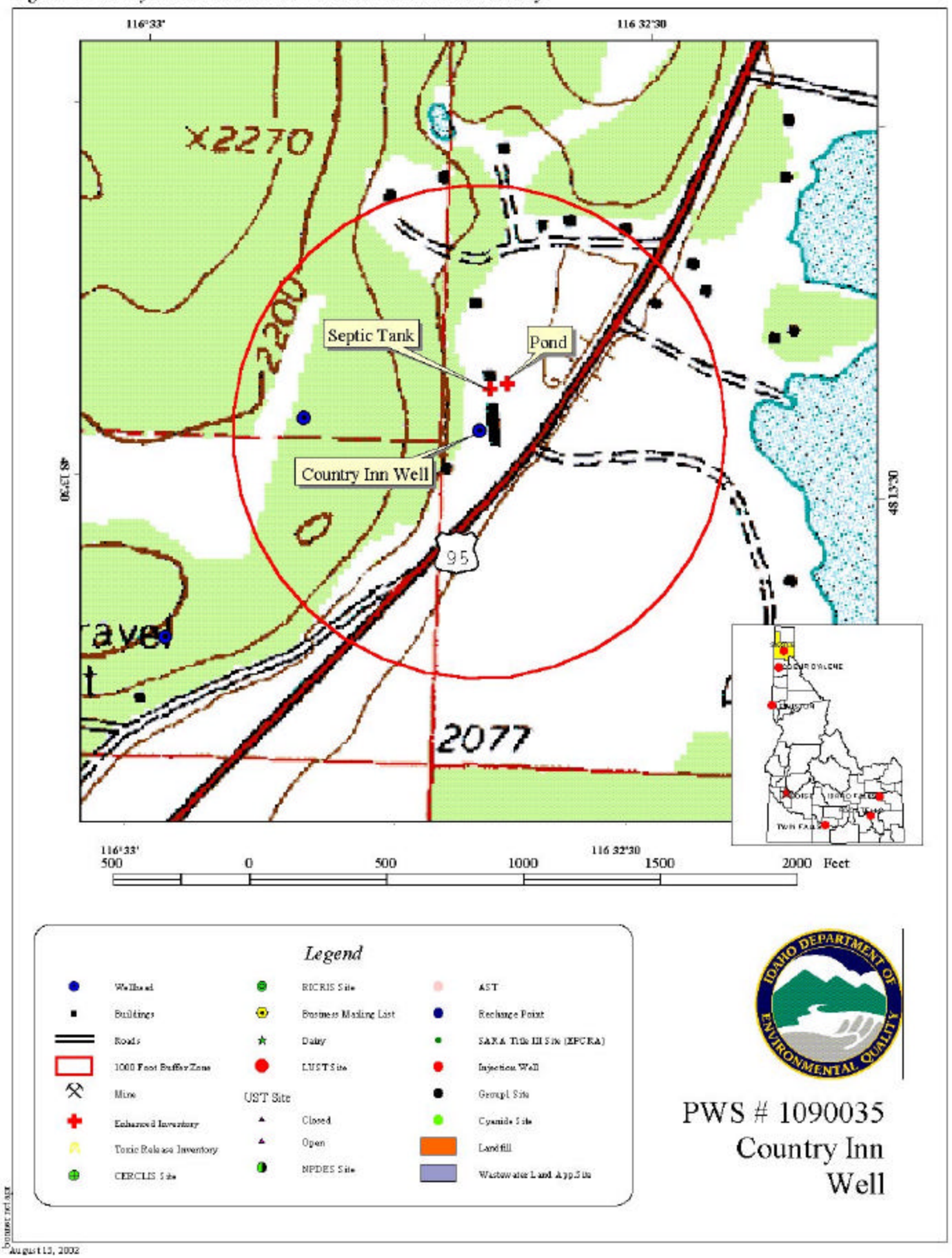
Assistance. Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request help with drinking water protection planning.

Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: http://www.deq.state.id.us

Figure 1. Country Inn Delineation and Potential Contaminant Inventory.



Ground Water Susceptibility

Public Water System Name : **COUNTRY INN** Well # : **WELL #1**

Public Water System Number : **1090035** 8/15/02 10:23:07 AM

1. System Construction		SCORE			
Drill Date	8/1/79				
Driller Log Available	NO				
Sanitary Survey (if yes, indicate date of last survey)	YES 1998				
Well meets IDWR construction standards	UNKNOWN	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	UNKNOWN	2			
Highest production 100 feet below static water level	UNKNOWN	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**4**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	UNKNOWN	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	UNKNOWN	2			
Total Hydrologic Score		**6**			
		IOC	VOC	SOC	Microbial
3. Potential Contaminant / Land Use - ZONE 1A		Score	Score	Score	Score
Land Use Zone 1A	SUBURBAN	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	1	1	1	2
(Score = # Sources X 2) 8 Points Maximum		2	2	2	4
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**3**	**3**	**3**	**4**
Cumulative Potential Contaminant / Land Use Score		**4**	**4**	**4**	**5**
4. Final Susceptibility Source Score		**11**	**11**	**11**	**12**
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

0 - 5 Low Susceptibility
6 - 12 Moderate Susceptibility
> 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.